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ABSTRACT

The study compared available placements, related services, and teacher qualifications for severely handicapped students in rural and urban areas of 190 school districts in 46 states. The effects of two predictor variables, percentage of urban population and median family income, on the following dependent variables were examined: student placement, proportion of related services given to severely handicapped students, number of teachers serving severely handicapped students, degrees held, and certification of teachers serving this population. Among findings were these: that severely handicapped students in urban districts were more likely to be placed in self-contained classrooms or special schools; that rural schools did not have a full continuum of services available for their severely handicapped students; and that rural and urban teachers appeared to be equally qualified. Educational implications are drawn and include the need to design instructional programs specific to placements in both rural and urban settings and the need for state educational agencies to make available to rural students all needed services. (Twenty-eight references are listed.) (DB)

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Educational Influences on Severely Handicapped Students in Rural Schools

Abstract

The purpose of this study was to compare available placements, related services and teacher qualifications for severely handicapped students in rural and urban areas. More specifically, this study investigated the relationships of two predictor variables-percentage of urban population and median family income-on the identified dependent variables. The variables investigated were: placements for severely handicapped students, proportion of related services given to severely handicapped students, number of teachers serving severely handicapped students, degrees held, and certification of special education teachers serving severely handicapped students. The data for this study were collected by a questionnaire. Questionnaires were distributed throughout the United States by a telecommunication system for special education, SpecialNet and by direct mail.

One hundred and ninety school districts from 46 of the 50 states comprised the sample. As the school district names were recorded, demographic data from the National Bureau of Census were developed. District identification numbers were used to record information about each district. The information selected from the demographic data set were regions, divisions and states of school districts , urban, rural and total populations of school districts, and median family income of school districts for 1979. The questionnaire responses were used to develop the dependent variables. These variables were clustered into three topic areas: placements, related services and teacher qualifications.

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Introduction

The education of severely handicapped students in both rural and urban areas has changed dramatically since the advent of P.L. 94-142 in 1975. Sontag, Burke, and York (1973) defined severely handicapped students as those who are not toilet trained, exhibit severe behavioral problems, are nonverbal, and grossly delayed in self-help, social, and motor skill development. Wehman (1979) identified severely handicapped students as the population excluded from public schools before the enactment of P.L. 94-142. These students, often rejected by the public schools, lacked the basic mobility, self-care, and communication skills needed to be included in the traditional school setting.

With the enactment of P.L. 94-142, numerous studies focused upon instructional processes for severely handicapped students. This led to the development of instructional technologies, curricula, and teaching strategies for the severely handicapped. However, Gold (1973), Prehem (1976), and Weatherley and Lipsky (1977) pointed out that little had been done to put the research findings pertaining to the education of severely handicapped students into teaching practice.

Brown, Nietupki, and Hamre-Nietupksi (1976) stated that in the past most severely handicapped students were educated within large residential facilities, self-contained schools, private facilities or the home. They added that placements of severely handicapped students have remained in self-contained schools or self-contained classrooms, removed from non-handicapped peers within public schools. They recommended that severely handicapped students be integrated more fully into the regular public school classrooms. However, placements, related services, and teacher qualifications were not described in this study. In addition, this study did not differentiate between rural and urban settings.

Sher (1978) and Helge (1984a) stated that the majority of unserved and underserved handicapped children were located in rural America before the enactment of P.L. 94-142. Most severely handicapped students were sent to in-state residential institutions or out-of-state placements. Very few rural school districts attempted to serve low-incidence severely handicapped students in their respective districts. Since the enactment of P.L. 94-142, many states with rural populations have made a conscientious effort to offer free and appropriate educational services to all handicapped students in the least restrictive

environment. This statement was documented by Helge's 1980 national survey on rural special education. It stated that from 1975 to 1980 there was a 47% percent increase in services for severely handicapped students in their respective school districts. The survey also indicated that, by 1980, most rural school districts were trying to serve the severely handicapped in their own districts (Helge, 1984b), despite the fact that individuals within this group are the most difficult population to serve.

Sontag, Burke, and York (1973), Stainback and Maurer (1976), and Sontag, Certo, and Button (1979) stated that there was a direct correlation between severely handicapped students' degree of disability and the extent of training needed by teachers to serve them adequately. Their research has suggested that the more severe the handicapping condition, the greater the competencies needed by the classroom teacher. Studies, including those by Burke and Cohen (1977) and Fredericks et al. (1977), were conducted to determine the competencies needed by special education teachers to properly instruct severely handicapped students. These studies did not differentiate between the needs of rural and nonrural special education teachers and thus assumed that the findings were applicable to both groups.

Under the requirements of P.L. 94-142, placements must be identified. Turnbull and Turnbull (1978) described the requirements for placement in the least restrictive alternative by stating that handicapped children should be educated with nonhandicapped students whenever possible. Turnbull and Turnbull (1978) also stated that the decision for placement was the responsibility of the Individualized Educational Plan (IEP) committee.

Studies by Blatt, Bogdan, Biklen, and Taylor (1976) stated that placement for severely handicapped individuals must have a continuum design to ensure that all individuals receive the most appropriate placement. Blatt et al. (1976) suggested that, instead of special schools for severely handicapped students, there should be a range of educational programs to ensure movement between placements. Beck (1976) described in detail numerous ancillary services that were needed for severely handicapped students. However, the only reference Beck (1976) made to placement was that it should be community based. A review of the literature pointed out that little research has been done on placements, related services, or teacher qualifications as related to educational settings for severely handicapped students.

The National Rural Research Project (NRP) was founded in 1976 to support research in rural education. Helge (1984a), Marrs (1984), and Helge (1984b), as members of the National Rural Research Project, brought to light the need for continued study in the area of rural special education. The above research has reinforced the fact that rural educational practices and teaching duties for special education are frequently vague and not clearly established. Newly demanded services were being delivered to severely handicapped students in rural areas without clearly defined educational strategies. Services were delivered to severely handicapped students in rural areas, without consideration of the educational, physical, environmental and psychological structures of rural settings. Population differences, distances and travel between schools as well as community structures were not taken into account when considering services for severely handicapped students. These services were often based upon urban populations and educational settings.

More recent surveys have questioned if rural special education teachers for severely handicapped students were qualified. Helge (1981) stated that "the greatest obstacle to full and appropriate services for handicapped rural students were difficulties in recruiting and retaining qualified staff" (p. 515). Helge (1984a), in an extension of her later studies reported that the major concern of eighty percent of the special education administrators was the recruitment and retention of qualified staff. The survey included two hundred special education administrators representing the fifty states. Studies by Helge (1984b), Smith-Davis, Burke and Noel (1984), Marrs (1984), and Kirmer et al. (1984) also identified the recruitment and retention of qualified staff members as a major concern of special education administrators.

Marrs (1984) further stated that rural special education teachers were not qualified because preservice and inservice training did not consider their needs. Studies by Marrs (1984) and Kirmer et al. (1984) asserted that difficulties in recruiting and retaining qualified rural special education teachers stemmed from the lack of appropriate preservice and inservice training programs available for these teachers.

Another factor that has greatly affected rural special education is the concept of continuum of services from which the delivery of services model is derived. As a result of this concept, severely handicapped students who previously were not placed within their school districts are now placed in classrooms within or near their respective district.

According to Helge (1984b), nothing has had a greater impact on American rural school systems than the presence of severely handicapped students. Helge's 1980 study, which surveyed 75 school districts, showed that the second greatest concern of special education administrators in rural school districts was the increase of severely handicapped students needing services within their respective districts. Only money for programs was considered to be a greater concern. The compilation of studies by Helge from 1980 to 1984 suggested that traditional strategies for the delivery of services for severely handicapped students did not exist in rural school systems. A continuum of services was not available due to the low incidence of severely handicapped students. Since traditional service models were largely developed for urban areas and were based on a continuum of services, these models appeared inadequate for rural settings.

Methodology and Procedures

The Sample

The study's sample was composed of 190 school districts throughout the United States. It was drawn from the 1976 school district census directory, the 1984 SpecialNet directory and the ACRES membership directory. Random selection of ten school districts from each state, plus 12 letters of assistance to members of the ACRES membership, constituted the 512 questionnaires sent. Each questionnaire was addressed to the special education administrator within each school district except for the letters of assistance. These letters were addressed to members of ACRES from states where no responses had been received four weeks following the initial mailout. These letters asked ACRES members to contact school districts in their respective states, so that questionnaire responses would represent all fifty states plus the District of Columbia.

The following information was recorded about the sample: the number of school districts that responded from each state, the total population residing within each school district, the urban population residing within each school district, and the rural population residing within each school district. Each district's rural and urban populations were determined by demographic information obtained from the United States Bureau of Census.

Rural school district was defined as any area where the number of inhabitants is fewer than 150 per square mile, or where sixty percent or more of the population is living in communities of no larger than 5,000 inhabitants. Districts with more than 1,000 students and those within a Standard Metropolitan Statistical Area (SMSA), as determined by the United States Census Bureau, were not considered rural (United States Bureau of Census).

The sample of 190 responses represented school districts from 46 of the 50 states. The four states in which no school districts responded were Hawaii, Ohio, Oklahoma, and Wisconsin. The District of Columbia was also not represented. Each state's population and the number of school districts were not considered when collecting data for this study. State education agencies were not contacted for assistance or asked to respond to any questionnaire. The sample represented 127 rural and 63 urban school districts. They ranged in size from 634 to 3,600,885 people. The median school district population was 16,166.

The sample was identified to study the research questions. The research questions were:

Research Question One

Do placements differ for severely handicapped students in rural settings as compared to urban educational settings?

Research Question Two

Do related services differ for severely handicapped students in rural settings as compared to urban settings?

Research Question Three

Do qualifications of teachers who are serving severely handicapped students differ in rural settings as compared to urban settings?

Procedures

The questionnaire was distributed through SpecialNet, a telecommunication system for special education, and through direct mail participation. Demographic information for the sample was derived from the Bureau of Census Population and Housing Summary Tape File 3 series (S.T.F. 3). The population and housing data contained in these tapes were collected for the 1980 census.

The data for this study has been adjusted to reflect percentages of urban populations within school districts. The percentage of urban populations identifies school districts as either urban, rural or a percentage of urban. The study's dependent variables were also adjusted to reflect percentages of severely handicapped students. This was done by dividing the total number of severely handicapped students into each dependent variable. This adjustment identifies the percentage of severely handicapped students to placements, related services and teacher qualifications. A multiple regression analysis was used as the initial exploratory process to ascertain whether or not the two predictor variables-percentage of urban population and median family income-individually and/or collectively influenced any of the dependent variables. The forced entry method was used. The forced entry method entered one variable at a time in order of decreasing tolerance. The variables were then computed as a single block. Individual multiple enter subcommands were used. The multiple enter subcommands specified that all variables be entered regardless of tolerance.

The variables identified for the study were:

1. percentage of urban population
2. median family income
3. proportion of severely handicapped students placed in regular classrooms
4. proportion of severely handicapped students placed in resource classrooms
5. proportion of severely handicapped students placed in self-contained classrooms
6. proportion of severely handicapped students placed in special schools
7. proportion of severely handicapped students placed in residential schools
8. proportion of severely handicapped students placed in institutional and/or hospital placements
9. proportion of severely handicapped students placed in home instruction programs
10. proportion of severely handicapped students placed in other placements
11. proportion of teachers serving severel handicapped students
12. proportion of teachers who hold bachelor's degrees
13. proportion of teachers who hold master's degrees

14. proportion of teachers certified in the area of special education
15. proportion of speech therapists
16. proportion of physical therapists
17. proportion of occupational therapists
18. proportion of psychologists
19. proportion of specialized district personnel
20. proportion of medical personnel
21. proportion of other specialized personnel.

Variables #1 and #2 percentage of urban population and median family income, were used as this study's independent variables. Variables #3 through #21 were used as dependent variables and were derived from the questionnaire. Variables #3 through #10, listed above, were used to answer the first research question. Variables #11 and #14 were used to answer the second research question. Variables #15 through #21 were used to answer the third research question.

Due to the nature of many school district populations, combinations of rural and urban populations exist. The Census Bureau population (tab 1.1, tab 1.2 and tab 1.3) variables were calculated to establish a single variable representing the urban population percentage within each school district.

In addition to population, Helge (1984a), Marrs (1984), and Sher (1978) also identified median family income as a predictor variable for identifying school districts as rural or urban. The above studies stated that median family income was lower in rural school districts than in urban ones. According to Helge (1984a), rural farming communities often have less income per family, and thus less of a taxation base. The taxation base may influence the ability to purchase services for the educating severely handicapped students.

This study's dependent variables were also adjusted for population differences. Each dependent variable was divided by the total number of severely handicapped students within each district. By dividing the number of severely handicapped students into each dependent variable a proportion of placements, related services and teacher qualifications were established.

Results

The results of the study were analyzed by using a multiple regression analysis. The multiple regression analysis was the initial exploratory process that used to ascertain whether or not the two predictor variables-percentage of urban population and median family income-individually and/or collectively influenced any of the individual dependent variables.

The multiple regression analyses determined that the following variables were significant.

1. The proportion of rural severely handicapped students placed in resource classrooms was found to be significant. An examination of the skewness using the correlation coefficient indicated that for the predictor variable, percentage of urban population, was skewed negatively -.245.

2. The proportion of urban severely handicapped students placed in special schools was found to be significant. An examination of the skewness using the correlation coefficient indicated that for the predictor variable, percentage of urban population, was skewed positively .242.

3. The proportion of urban school districts using other specialized personnel was found to significant. An examination of the skewness using correlation coefficient indicated that the predictor variable, percentage of urban population, was skewed positively .200.

Discussion

Findings

The profiles or trends developed by the multiple regression analysis identified ways in which to explain placements, related services and teacher qualifications for severely handicapped students. All severely handicapped students were placed within a continuum of available placements. Urban school districts had greater placement opportunities available for severely handicapped students than rural school districts. Severely handicapped students in urban school districts were most often placed in self-contained classrooms and special schools. When a greater number of placements was available, adherence to the

spirit of Reynolds' (1962) or Deno's (1972) continuum of services concept of placement within the least restrictive environment did not occur. The reverse appeared to occur. Although the placements options for severely handicapped students were greater in urban school districts, placement of severely handicapped students appeared more restrictive.

The limited number of placements in rural school districts often dictated placement. Helge's (1984a) statement that a continuum of services as described by Reynolds (1962) and Deno (1972) was not available to rural severely handicapped students was supported. Severely handicapped students in rural school districts were often placed in regular classroom settings, resource rooms or out of district placement.

The findings concerning related services for severely handicapped students found that most school districts used available related services. Urban school districts had greater numbers and more diverse related services available than rural school districts. The rural classroom teacher who was serving severely handicapped students appeared restricted by low support for program development and instruction and by the limited number of available related services. The rural classroom teacher's support system may include a speech therapist, psychologist and possibly, advice from a physical or occupational therapist. The urban classroom teacher's support system may include speech therapists, physical therapists, occupational therapists, medical personnel and other specially trained personnel.

Qualifications for teaching severely handicapped students, as related to degrees held and certification requirements, appear identical. Rural teachers appear to hold the same qualification as their urban counterparts. Both rural and urban teachers serving severely handicapped students were certified by their respective states. All rural and urban teachers held either a bachelor's or master's degree.

Educational Implications

Several educational implications result from this study. The findings indicate that the significant variables for placements and related services are associated with percentage of urban population, but not median family income. They do not, however, indicate that these variables have a cause-and-effect relationship. The suggestions that follow are based on the educational implications of this study that have resulted from the relationship of

placements, related services and teacher qualifications to percentage of urban population.

1. Identify and design instructional programs specific to placements for severely handicapped students in both rural and urban settings. Placements are dictated by the numbers of severely handicapped students within a specific setting. Given the number of severely handicapped students and placements available, design educational programs that meet the specific needs of the severely handicapped student. Educational requirements, educational needs, and services available must be identified and developed into a plan that will support a specified placement. By identifing and devloping an educational plan by placement requirements, duplication and replication of exemplary instructional strategies can be carried out with a greater degree of success.

2. Develop inservice programs for urban school districts that encourage less restrictive placement of severely handicapped students. Given the guidelines of PL 94-142 for the least restrictive placement alternative, pursue placement options that may prove less restrictive, yet meet the severely handicapped student's educational objectives.

3. Develop inservice programs for rural school districts that support present placements of severely handicapped students. The number of severely handicapped students within a rural school district dictates placements. If small numbers of severely handicapped students reside within rural school districts, inservice training must take into account specific placements of severely handicapped students.

4. Encourage state educational agencies to develop state plans for related services for severely handicapped students. The offering of related services must take into account the student's specific disability. The unavailability of some related services in rural school districts must encourage state educational agencies to employ and distribute those services to all severely handicapped students within the state.

5. Encourage state educational agencies to take a more active role in the recruitment and retention of related services within rural school districts. Those rural school districts that may wish to employ related services may need recruiting assistance from state educational agencies. The individuals at the state level with contacts at colleges, universities and other state agencies may need to assist

rural districts with hiring and deployment of related services.

6. Equalize related services within a state by sponsorship of related services teams for rural school districts. Urban school districts in states with large rural populations may be encouraged to share related services by contracting or by sharing expenses. Related services teams from urban school districts, through state sponsorship, should assist rural school districts to purchase related services.

7. Encourage cooperative hiring practices of related services for rural school districts. Rural school districts may wish to pool resources for the hiring and distrubition of related services. Related services teams may be employed by cooperative agreements among rural school districts.

8. Present preservice educational strategies for educators serving severely handicapped students, including educational strategies that take actual placements into account. Given the placement of severely handicapped students within the state, encourage practicum experiences in locations that may serve rural placements. Those colleges and universities surrounded by rural school districts should encourage student experiences related to the placements that in which the student is most likely to seek employment.

9. Develop inservice programs for rural and urban special education teachers serving severely handicapped students that include the use of related services and teacher aides. The employment or contracting of related services and teacher aides requires management of time and personnel. Teachers for severely handicapped students need to establish effective strategies for the deployment of specialized staff members and teacher aides to meet their studennts´ needs.

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